

CLAIMS

1. A peptide-lipid complex in an aqueous solution, characterised in that said lipid is a bilayer-forming galactolipid material and that the weight ratio between the peptide and the galactolipid material is 1:5 – 1:50, with the proviso that the peptide is not LL-37.
2. The complex according to claim 1, wherein the weight ratio between the peptide and the galactolipid material is 1:10 - 1:50.
3. The complex according to claim 1 or 2, wherein said peptide is a charged and amphiphilic peptide having a molecular weight below 30 kDa.
4. The complex according to any of claims 1-3, wherein the peptide has at least four positively charged amino acids.
5. The complex according to any of claims 1-4, wherein the peptide is in the form of a pharmaceutically acceptable salt.
6. The complex according to any of claims 1-5, wherein the galactolipid material is a polar lipid mixture rich in digalactosyldiacylglycerols.
7. The complex according to any of claims 1-6, wherein the galactolipid material is CPL-Galactolipid.
8. The complex according to any of claims 1-7, wherein the peptide is an apolipoprotein or an apolipoprotein analogue.
9. The complex according to any of claims 1-7, wherein the peptide is selected from the group consisting of insulin, glucagon, erythropoietin, darbepoietin, streptokinase, somatropin, desmopressin, oxytocin, gonadorelin, nafarelin, octreotid, lanreotid, ganirelix, cetrorelix, teriparalid, and salmon calcitonin.

10. The complex according to any of claims 1-7, wherein the peptide is selected from the group consisting of magainin 2, cecropin, and histatin.

11. The complex according to any of claims 1-7, wherein said peptide is a cationic antimicrobial peptide having a molecular weight of 2.5 - 5 kDa.

12. The complex according to any of claims 1-7 and 11, having a peptide:galactolipid weight ratio of 1:10 – 1:27.

13. The complex according to any of claims 1-7, 11 and 12, wherein the peptide is selected from the group consisting of LL-25, LL-26, LL-27, LL-28, LL-29, LL-30, LL-31, LL-32, LL-33, LL-34, LL-35, LL-36, and LL-38.

14. The complex according to any of claims 1-7, and 11-13, comprising the peptide LL-25 and a galactolipid material.

15. A colloidal solution of a complex according to any of claims 1-14, wherein the mean size of said complexes is below 100 nm.

16. A colloidal solution of a complex between LL-37 and a bilayer-forming galactolipid material, wherein the mean size of said complexes is below 100 nm.

17. A colloidal solution of a complex according to claim 15 or 16 for use as a medicament.

18. A method of preparing a colloidal solution according to claim 15 or 16, characterized in the following steps:

(i) weighing of the galactolipid material as a dry, free-flowing powder in an appropriate container, e.g. a flask made of borosilicate glass or

polypropylene plastic, to a final concentration of 1 to 5 mg/g, which container allows for a headspace which is equal to or larger than the final volume of the solution;

(ii) selecting an aqueous medium with an ionic strength >100 mM and an appropriate pH, normally in the range of 4 to 10 but preferably around 7;

(iii) weighing of the peptide in another appropriate container, e.g. a flask made of borosilicate glass or polypropylene plastic, and adding the selected aqueous medium to a peptide concentration corresponding to a final weight ratio between the peptide and galactolipid material of 1:5 to 1:50;

5 (iv) adding the peptide solution (iii) to the dry galactolipid material (i);

(v) shaking the mixture from (iv) vigorously at room temperature using a suitable shaker at high speed for at least 1 h or until the mixture has become clear; and

10 (vi) equilibrating the resulting colloidal solution.

19. Use of a colloidal solution of a complex according to any of claims 1-16 for the manufacture of a medicament.

15 20. Use of a colloidal solution of a complex according to claim 15 or 16 for the manufacture of a medicament for treatment of infections, wound healing or other diseases with a deficiency in antimicrobial activity.

20 21. Use of a colloidal solution of a complex according to claim 20 for the manufacture of a medicament for topical treatment of infections, wounds, atopic eczema and other conditions deficient in antimicrobial activity and/or angiogenesis.

25